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St. Bartholomew's Hospital Journal,
SEPTEMBER, 1900.

"Æquam memento rebus in arduis
Servare mentem."—Horace, Book ii, Ode iii.

Sunstroke.

A Clinical Lecture by DR. GEE, delivered June 22nd, 1900.

Reported by Dr. T. J. HORDER.

HE great height of the thermometer during the past few days (up to 88° in the shade), and the admission of certain cases of indeterminate fever, raise the question of sunstroke in England. My remarks to-day are based upon the experience of a person who has never practised out of England.

Whenever the temperature in the shade reaches 90° you may expect cases of sunstroke. Some prefer the name of heatstroke, because the direct rays of the sun are not always

present; which is a fact:—the attack may occur indoors. But, after all, the heat does come from the sun; so it matters little.

The occurrence is undoubtedly aided by two conditions—(1) Fatigue and (2) drink. As a matter of fact, sunstroke is much associated with these; they predispose persons to it.

The symptoms are two—(1) High fever; the temperature must really be high. (2) Disturbance of cerebral functions. The form taken by (2) is either (a) coma, (b) delirium, or (c) both.

(a) The Greeks called the combination of coma and fever *lethargos*, lethargy. The combination of delirium and fever was *phrenitis*, frenzy. Phrenitis with coma was called *typho-mania*. These are useful terms enough, but are now never employed.

In all diseases coma is a more dangerous symptom than delirium. It is quite possible you may find that aphorism in Hippocrates; if not, it is true as a large general statement. Indeed, the danger of delirium is that it may end in coma. "Febrile coma," or "heat apoplexy," is not a bad name, because "apoplexy" does not mean haemorrhage into the brain, but coma coming on suddenly.

The facts I am about to mention are the result of actual experience. As regards the first case I shall quote, if it was not sunstroke I am at an utter loss to say what it was.

CASE 1.—Young man, brought to hospital July 22nd, 1868. Weather excessively hot: 90° in shade of Royal Exchange. Was wheeling baker's truck along sunny side of Fleet Street, staggered and fell; brought to hospital. On admission: deep coma, temp. 109.5°, livid, universal livid mottling, like the subcuticular rash of typhus, all over body; loud systolic murmurs at base of heart. Unfortunately cold was not used, and he died half an hour after admission. Post mortem, no definite lesion found. The mottling disappeared after death.

Cases of high fever like this always die very quickly unless properly treated, that is if the temperature is not brought down by the application of cold.

CASE 2.—The second case I shall mention is that of a

porter in the General Post Office, who was attacked at 2 p.m. on a day in July when the maximum temperature in the shade registered at Camden Town was 92° F. He was seen to stagger in coming downstairs at the Post Office. On reaching the bottom he lay down, but did not fall, and was convulsed—striking out, clutching his necktie, etc. He had been previously working in a very hot room, but not exposed to the direct rays of the sun.

He was brought to the Hospital at 2.30 p.m. (and even before he entered the ward, as he was being brought upstairs, hearing his loud and stertorous breathing, I was able to say, "Here clearly is a case of apoplexy coming in"). He was then unconscious; pupils fixed, left rather larger than right. No paralysis of any kind could be made out. Breathing stertorous, 36; pulse 140, fair volume, regular. Heart's apex in natural situation; no dulness to percussion in the hypogastrium. Axillary temperature, 107.5° . He was at once placed in a bath at 70° F., and kept there for about a quarter of an hour. The water could not be cooled below 70° F., though large lumps of ice were placed in it. His bowels were moved in the bath. Rectal temperature when placed in the bath, 109.8° ; when removed from the bath, 109.4° . When placed in bed again he was very blue, and respirations 40, laboured and shallow; pulse 160, small and irregular. Six minims of ether were injected under the skin of the arm, and an enema of beef-tea and brandy given, which was immediately returned. Rectal temperature at 3.45, 104.5° ; pulse, 132, regular, stronger. Ice-cap put on. Temperature at 4.30, 101.8° , but general condition remained unaltered. Slight convulsive movements of the face and hands were noticed at this time. (You can reckon upon the temperature always falling as much *after* the bath as before it. It is bad practice to keep the patient in the bath until the temperature is normal, so as soon as the temperature is reduced a few degrees or less, take the patient out of the bath, and let him lie on the bed covered with sheet only.)

9.30 p.m.—Has passed urine and three loose motions under him. Three ounces of turbid urine, withdrawn by catheter, were found to be highly albuminous. Temperature had risen to 104.2° ; pulse, 130, moderate volume, regular; breathing, 36, quiet; heart-sounds natural. Has vomited twice. Now lies with his head and eyes persistently turned to the right side. Still unconscious, but has been able to swallow small quantities of milk, brandy, and beef-tea. (Note that the fall of temperature had no immediate effect upon the other symptoms.)

July 6th, 1.30 a.m.—Head and eyes still turned to right. Arms flexed and rigid; slight rigidity of legs also. Swallows badly. Eight ounces of a mixture of beef-tea, brandy, and milk were administered by means of a tube passed through the nose. Temperature, 100.2° ; pulse, 120; respirations, 32; no stertor.

5 a.m.—Slept fairly; has said "Yes," but not in answer

to a question. Pulse, 120; respirations, 32. Face, eyes, and arms as before. Temperature at 3 a.m., 100.2° .

10 a.m.—Temperature, 99° ; pulse, 112; respirations, 30. Still unconscious; the rigidity of the arms and deviation of the head and eyes remain as before. Has passed two loose motions under him. Fundus natural in both eyes.

10 p.m.—Knows his sister, and has answered questions. Pulse, 108; respirations, 30. The deviation of the head and eyes and the rigidity of the arms have ceased. Considerable inflammation of the conjunctivæ (due to bath).

July 7th.—Slept fairly, but tried once or twice to get out of bed. Answers questions quite coherently, but in a thick voice. Motions and urine still passed under him. Temperature, 97° ; pulse, 90, fair volume.

July 8th.—Some delirium last night, but on the whole slept fairly. Rational this morning. Pulse, 60, regular; temperature, 97° . No longer passes motions and urine under him. Urine acid, specific gravity 1027, no albumen. Very little muscular power.

From this time till July 19th he remained much in the same state—occasionally troublesome at night and stupid, but capable of answering in the day. His muscular power, however, increased. From July 9th to 19th he took 30 grains of bromide of potash every six hours.

July 19th.—Is more troublesome in getting out of bed; passes motions and urine under him; decidedly more stupid and confused. Temperature yesterday evening, 99.4° ; this morning, 97° . From this time till August 9th he slowly improved, and even began to read the paper, but very often held it upside down, and would seldom give any account of what he had read. The speech gradually became less distinct. He still, however, frequently passed his motions and urine under him.

From July 19th to 26th he had 10 grains of iodide of potassium four times a day. On the 26th the dose was increased to 15 grains, and so remained until September 14th.

He gradually improved until his discharge on September 23rd, when the following note was taken:—He is now quite rational, and able to get about very well. Speech is still a little indistinct, and manner somewhat fatuous; but he seems well able to understand what he reads and hears, and is quite willing to make himself useful about the ward.

To repeat a few points this case illustrates. Besides coma there were other nervous symptoms—(1) *slight convulsions*; (2) *rigidity of the limbs*; (3) *lateral deviation of the head and eyes*; (4) *diarrhoea and vomiting*; (5) *albuminuria*. Diarrhoea and vomiting occur in many acute brain diseases; they are cerebral symptoms. Albuminuria, again, may be present in all apoplectic diseases; no matter what the cause may be, there is great congestion of the lungs and all the abdominal organs. An eminent physician was wont to say that he could distinguish the lungs from a case of apoplexy in the post-mortem room by their great con-

gestion. It is so also in epilepsy, which is a kind of apoplexy. I think this explains the albuminuria,—it soon passes off. The congestion of the lungs shows itself as the lividity. It is important to know of the occurrence of this albuminuria, especially if associated with coma and slight convulsions, otherwise one may be led to say, in the presence of such a condition, "Here is a case of uremia, obviously;" whereas, it may really be nothing of the kind.

It is very important to note the persistence of the cerebral symptoms, even though the temperature be reduced to normal, and remain normal for weeks. The brain is injured, and does not soon recover. Many cases never completely recover. The patients are never quite the same afterwards; the cerebral functions are not what they were before the attack.

CASE 3.—The last two cases were both very rapid ones. The next one was less rapidly fatal. It was that of a little girl, aged 6½ years, who was attacked at 2 a.m., the temperature in the shade having been 91° F. the day before. She went to her nurse's bed complaining of cold and shivering; at 2.15 a.m. she vomited, and soon afterwards became hot. The vomiting was repeated, and the bowels soon became relaxed. At 6 a.m. a solid, natural stool; 8 a.m. another stool, watery; vomited at same time green water (some people, including Hippocrates, think there is a tendency to green vomit in brain injuries and diseases); took some bread and milk, brought it up again almost instantly curdled. 10 a.m., quite rational, listened to reading; castor oil given; bowels open soon after, dark brown, watery, not fetid. 11 a.m., fell asleep for half an hour; on awakening was mildly delirious, talked nonsense, picked at bed-clothes. Soon after, severe convulsions, lasted four or five minutes, followed by coma so deep that she could not be roused. 1 p.m., pupils largely dilated, immovable. 4 p.m., saw her with Dr. Metcalfe; looks dying; comatose, but can be roused somewhat; drink put into her mouth remains there until she is made to sit up; lips livid, but rubbing them gently makes them florid; skin everywhere injected, mottled, livid; temperature in armpit 105°; feet and hands cold; any part of body becomes cold on exposure; pulse 200, very weak; breathing deep, regular, air enters lungs well; no physical signs of disease in chest, no dyspnoea, no action of nares, no tache cérébrale; eyes half shut, pupils largish; not wholly insensible, equal; no strabismus; slight nystagmus; abdomen retracted; has just passed a scanty mucous yellowish motion; rigidity of limbs, and somewhat of back. Ice was applied to head, and warmth to rest of body. 9 p.m., died comatose. No otitis at any time.

I should not have brought this case before you if we had not had an opportunity of examination by a post-mortem, my note of which runs as follows:

Examination of body twenty-two hours after death.—Rigor mortis well marked. Blotchy purple discolouration

of skin all over body, not removable by pressure. Eyeballs singularly sunken. Removing scalp, much blood oozes from sutures. Calvaria natural. Small black clots in sinuses of dura mater. Arachnoid sticky, no effusion. Vessels of pia mater decidedly full of blood, but no exudation whatever anywhere; no tubercles. Brain looks swollen; convolutions much flattened; ventricles remarkably empty; on careful examination it seemed otherwise natural, not soft. Heart, lungs, kidneys, liver, spleen, stomach, natural. Intestines natural; nothing in them but air, and not much of this.

The fourth case which I shall read to you was even less rapid still in its course.

CASE 4.—A needlewoman, employed at a large drapery shop in Holborn. She was attacked on the same day as the man whose notes I read just now,—on a day when the temperature was 92° F. in the shade. Admitted July 27th with the following history:

On July 5th, while at work in a room into which the sun was shining, she suddenly complained of headache and pain in her left side. Soon after she became unconscious, and her skin was noticed to be very hot. She remained unconscious eighteen hours, and was convulsed during part of that time. She was treated with huge doses of calomel. On the following day she was seen by a medical man, who found her temperature to be 104.5°. She remained in a drowsy, semi-unconscious state for two days more, then great improvement began; her mind cleared, and she was able to converse rationally. Three days afterwards she relapsed; her mental condition seemed dull; her speech also thick, and frequently incoherent. There was no elevation of temperature. For a day or two she passed her motions under her, but did not habitually do so. In this state she was admitted.

Fundus of both eyes natural. No albuminuria.

August 3rd.—Has certainly improved in intelligence since admission; all movements and speech are slow but rational. No longer passes motions and urine under her.

From this time until August 12th she continued to improve, but from August 13th to 21st was very incoherent, and had delusions. Her temperature during this time was not elevated, and her general condition remained good.

She then began slowly to improve again, and on August 30th her conduct and conversation were noted as quite rational. A final note before her discharge on September 14th is to the effect that she does needlework and reads, and is going about the ward all day, being to all appearance as clear-headed and capable as she ever was.

Here was a case, then, which was not treated,—unless huge doses of calomel can be called treatment,—a patient admitted with the effects of sunstroke, and we were treating these effects, not the attack itself.

Treatment.—This consists of one thing: cold. If the patient is too weak for a bath, or this is not available, strip

him naked, place him upon a mackintosh, and bathe the body with the coldest water procurable, or with ice, rubbing the body with it. This is provided the temperature is high, and is high all over the body. The principle is the free application of as much cold to the skin as can be managed. If the extremities are cold, this application of cold becomes dangerous. This was so with the little girl whose case I mentioned, where we were afraid to use the cold bath, but instead used ice to the head. This rule was laid down by the man who first systematically and intelligently used cold applications, Dr. James Currie, of Liverpool. He introduced a method of treating patients with scarlet fever by pouring buckets of cold water over them.

Pathology.—Quite unknown. I am not discussing cases of high fever with delirium,* because the pathology in them is quite different,—it is a meningitis, cerebral or cerebro-spinal. Sunstroke may have something to do with them, but the whole course of these cases is quite different from those I have described to-day.

The After-treatment of Abdominal Sections.

By T. P. LEGG, F.R.C.S., Surgical Registrar and Tutor,
King's College Hospital.



THE success of an abdominal section depends largely on the after-treatment, and as sooner or later every medical practitioner is sure to have such a case under his care, some account of the line of treatment which may be adopted may be useful.

In this paper it is proposed to deal with cases which run an uncomplicated course; such cases comprise the majority of laparotomies. Still, every case requires the most careful attention and watching, as serious complications may arise at any time, and in the promptness of the treatment lies the only hope of success. The most common of these complications are haemorrhage, intestinal obstruction, and septic peritonitis. Their diagnosis and treatment would require a separate article. In an uncomplicated case, *i.e.* in one where these graver conditions do not arise, any or all of the following conditions may require treatment.

(a) *Immediate treatment at the end of the operation.*—The patient is placed in a bed which has been warmed, and is covered by warm blankets, and two or three hot bottles covered with flannel jackets are placed under the clothes so as not to be in contact with the patient. As the effects of the anaesthetic pass off there is sometimes considerable restlessness, which can generally be controlled by gentle persuasion, and soon the patient passes into a quiet sleep

* See a paper entitled "Phrenitis Aëstiva," 'St. Barth. Hosp. Reports,' vol. xii.

or dozes. Smarting pain may be complained of in the wound, but it is not often severe enough to call for active treatment. In other cases the restlessness and pain are more marked; the patient throws himself about, and is never still. If the restlessness is such that harm may result from it, morphia must be given hypodermically, and usually a small dose— $\frac{1}{10}$ gr.—is sufficient.

A much more important case is one in which there is considerable collapse at the end of the operation. This collapse may be due to several causes: (1) the length of the operation and its severity; (2) the amount of blood lost; (3) the patient may be very ill, or old and feeble at the time of the operation. The ultimate result in these cases depends very much on the progress of the first few hours following the operation. In these patients an enema given before the patient leaves the operating table is very useful; such an enema consists of half a pint each of hot water and beef tea, with one or two ounces of brandy, given at a temperature of 105° , and through a tube and funnel; hot coffee is by some surgeons used in a similar way. In addition to the enema, strychnine hypodermically is valuable, specially when the collapse is due more to shock from the severity of the operation rather than loss of blood. The enema is usually rapidly absorbed, and may be repeated in an hour or two, according to the condition of the patient. If the patient is not sick, and can swallow, small doses of brandy and hot water by mouth are valuable. In the worst cases, when there has been haemorrhage, infusion of saline solution into a conveniently placed vein, usually the median basilic, is the best treatment; two or three pints, with or without brandy, may be injected. An important point is to have the fluid hot (110° or 115°) in the funnel, as the temperature rapidly falls in its passage through the tube. If the patient is going to do well the pulse will improve, and continue to improve, becoming slower and increasing in volume and force; the colour of the lips will deepen, and the extremities will be warm.

(b) *Pain.*—One of the commonest things a patient after an abdominal section complains of is "pain in the back." This pain is a constant ache in the loins. Its severity varies; some patients complain bitterly, others have it only very slightly or not at all, even when asked the direct question. Fortunately one can comfort the sufferer by the assurance that it generally passes off in twenty-four to thirty-six hours. A firm pillow placed under the loins, or turning the patient on to one side, supporting the back with pillows, generally gives relief.

In the wound and abdomen there is often a sharp cutting pain, made worse by coughing or drawing a deep breath. In many cases this is so slight that treatment is not called for. In other cases it is so severe that the patient cries out, is restless, throwing his arms about, and does not sleep. The best remedy is morphia hypodermically in a small dose, $\frac{1}{10}$ to $\frac{1}{6}$ gr., repeated if necessary. This leads to the

question of giving morphia after an abdominal operation. Some surgeons give it as a routine, others are strongly opposed to its use at all, maintaining that it produces sickness and intestinal distension. The best rule to follow is to give the drug when pain is so great that the patient is very restless, unable to sleep, and it appears more likely that harm will result by not giving it, especially if the pulse is being affected. Under such circumstances morphia is very beneficial. It should always be given in a small dose, and should be given with strychnine if the pulse is weak. A large majority of cases can be perfectly well treated without it.

(c) *Thirst* is best relieved by giving hot water in small quantities by the mouth, or by injection of hot water into the rectum. The latter method is the most valuable means of treating thirst. The fluid is rapidly absorbed and acts as a stimulant. It has the further advantage of keeping the stomach empty and thus preventing vomiting. The quantity to be given depends on the degree of the thirst, and whether it is retained or not. A pint or more may be injected by means of a funnel and tube passed as high into the rectum as possible and repeated as required. Mere rinsing of the mouth with hot water, or water and lemon juice, is very grateful to the patient. Many patients ask for ice, but it is not advisable to give it, as it does not do much good, and often makes the patient sick, the cold water accumulating in the stomach and then being rejected.

(d) *Sickness*.—The vomiting which occurs may be of two kinds:—(1) that which comes on immediately, and is partly due to the anaesthetic, partly to the operation itself; (2) that which comes on later, three or four days after the operation: this latter is the more serious, and causes more anxiety, as it may mean the presence of peritonitis; the former is less important, unless it is very persistent and severe. Often the patient is not sick more than once or twice; in other cases vomiting or retching may go on for twelve to thirty-six hours, consisting of mucus, bile-stained, or mixed with what has been taken by mouth. In another class of cases the vomiting will cease for a time, and then begin again; this generally happens if the patient has been fed too early by mouth, or in too large and frequent amounts. Provided the pulse is not increasing in frequency or diminishing in volume, and the patient's general condition is satisfactory, this early vomiting is not of much importance; it ceases spontaneously, or yields to treatment. The first thing to do is to give nothing by mouth for the first twelve hours; this alone is frequently sufficient. In other cases really hot water in doses of $\frac{3}{j}$ or $\frac{3}{ij}$ will be successful, and if constantly small amounts of mucus are being brought up, washing out the stomach with hot water is most efficacious. The easiest way to do this is to give $O\frac{1}{2}$ — Oj of hot water at one draught, with or without the addition of gr. xx Sodii Bicarb., which serves to

dissolve the mucus. Shortly after taking it the whole is vomited, and the patient is much relieved, getting several hours' freedom from vomiting. If the first washing out is not sufficient it is repeated. Ice is not advisable as a remedy, but succeeds sometimes when other remedies have failed. Champagne in doses of $\frac{3}{j}$ to $\frac{3}{iv}$ is useful, specially if the pulse is feeble. Of drugs, Bismuth Subcarbonate in large doses (gr. xx—xxx) is the most reliable. It is best given in wafer papers; patients will often retain it when so given who have vomited when it has been given by the usual method. If the sickness is due to the food being given too early, or in too large quantities, a change in the quantity and quality will usually effect the cure, or total cessation of all food by mouth for a time may be necessary.

Sickness coming on later—after the third or fourth day is always a cause of anxiety, and may be due to—1, mechanical obstruction; 2, peritonitis; 3, distension with flatulence.

(e) *The use of the catheter*.—Many patients cannot pass their urine voluntarily after the operation. Too early use of the catheter should be avoided, as it has dangers of its own, and should only be used when the patient is in actual discomfort from being unable to pass the urine. Change in position will sometimes enable the urine to be passed naturally. Whenever a catheter is necessary special care must be taken to sterilise the instrument and cleanse the urethral orifice.

(f) *Feeding the patient* is one of the most important factors in the after treatment of an abdominal operation. Certain general rules can be laid down, but each case has to be treated on its merits. In the first place it is advisable to give nothing by the mouth for the first twelve hours; thirst can be relieved by other means. If the patient is feeble, nutrient enemata should be given from the outset. A suitable enema is one composed of equal parts ($\frac{3}{ij}$) peptonised milk and beef tea, with brandy $\frac{3}{ij}$ to $\frac{3}{vij}$, according to circumstances added, and given every four hours. Larger enemata are not often retained; in a few cases much larger ones are retained; in other cases much smaller ones may be required. The yolk of one or two eggs may be added to each enema. The brandy may so irritate the rectum that the enema is not retained; diminution of the quantity or removing it altogether overcomes the difficulty. During the time the enemata are being given the bowel should always be washed out at least once every twenty-four hours, as there is always some débris left. As soon as possible feeding by mouth should be commenced, the rectal feeding being continued till sufficient food is taken, and in a large number of cases rectal feeding is not called for,—as, for instance, when the patient has been in good health up to the time of the operation, and afterwards vomiting is not severe. My usual plan has been to begin with peptonised milk or milk and barley water in equal quantities— $\frac{3}{ij}$ to $\frac{3}{iv}$ every hour, and gradually

increase the amount. As the amount is increased the time between each feed is lengthened. If milk cannot be taken, or is not digested, beef tea in similar amounts may be given. Many patients object to peptonised milk on account of its flavour, but will take readily plain milk and hot water. Whey and albumen water are also useful substitutes in some cases. All food should be given hot, and it is better not to give soda water—it increases flatulence. Women especially like tea, and there is no objection to its use if it is freshly infused: occasionally it seems to make the patient vomit; if it does not there is no reason why it should not be given. By gradually increasing the amounts of food the patient is taken on to custard or an egg beaten up in milk. On the evening of the third or fourth day (if no operation on the intestinal tract has been done) a purgative is given, the most useful purgative being half or an ounce of castor oil, followed if necessary by an enema of soap and water; and after the bowels have been opened, bread and butter and a lightly boiled egg are allowed, then fish, and so on to light diet.

(g) *Abdominal distension*.—After an abdominal operation considerable distension may come on, not due to obstruction. If there is obstruction the pulse rate rapidly rises; in simple flatulent distension the rate does not increase, and the volume and regularity is maintained. In the latter a rectal tube passed as far as possible, and retained some time, may do all that is required. A better method of treatment is to give a turpentine enema— $\frac{5}{2}$ j or $\frac{5}{2}$ j beaten up with the yolk of an egg to the pint of soap and water; a quantity of flatus is passed with obvious relief. If this fails a saline purgative followed by an enema is given. In slight cases change of position is useful, and in the more severe cases hypodermic injections of strichnine (m.v or more) are valuable in addition to the other remedies. To prevent the recurrence of the distension the bowels should be kept regularly opened by means of salines and small doses of belladonna.

Carcinoma of the Oesophagus.

A Paper read before the Abernethian Society, February 14th, 1900.

By L. B. RAWLING, F.R.C.S.

HE time at my disposal does not allow me to go as fully into this disease as I should wish. Still, I trust that in spite of many defects the subject will be of interest to you. It is written from cases under my own observation, and from 100 cases admitted to this hospital within the last seven years.

Gurlt shows from over 11,000 cases that the absolute frequency of cancer reaches its maximum between the ages of forty-one and fifty. Malignant disease of the oesophagus, however, seems to be rather later in its onset. Between fifty and sixty is the commonest period of life during which this disease manifests itself, as the following table will show:

Between 20—30	...	...	...	1 case
" 30—40	...	...	...	1 "
" 40—50	...	...	...	22 cases
" 50—60	...	...	...	32 "
" 60—70	...	...	...	22 "
" 70—80	...	...	...	5 "

The earliest case was at twenty-eight, and the latest at seventy-four. I could not satisfy myself that the age of the patient had any marked influence on the rate of growth and duration of the disease. In this situation cancer is about twenty times more frequent in the male than in the female.

Without entering into the much-discussed question as to the origin of cancer, one cannot but be struck by the fact that here we have an organ essentially the same as regards development in the two sexes, yet one so frequently the seat of malignant disease in the male, and so rarely in the female. As I shall show later on, three main sites are almost exclusively the parts attacked, and these three sites are where the lumen is most narrow, and where friction is consequently the greatest. It appears, therefore, probable that long-continued mechanical irritation is an important factor, with subsequent ulceration and downgrowth of epithelium.

No explanation as to the greater frequency in the male is forthcoming, and the whole subject is beset with so many difficulties that it is quite beyond the scope of this paper.

Family history.—There is a marked absence in the family history of any form of malignant disease, and in no case was I able to find any history of this particular variety. Some writers have also stated that tuberculosis was unusually frequently co-existent with oesophageal new growth. I could find no basis for this statement.

SYMPOMS AND DIAGNOSIS.

(1) *Dysphagia*.—A gradually increasing dysphagia is present in the very large majority of cases, but in some few cases the onset was acute, all the later symptoms dating from one particular meal, at which a bolus stuck in the patient's throat, there having been previously not the least sign of any organic lesion. In some few also dysphagia was completely absent. There is frequently no definite relation between the degree of dysphagia and the amount of stricture present. In one case no bougie of even the smallest size was ever passed beyond eight inches, and yet the patient was able to swallow comparatively well till quite the end. Other cases illustrate just the reverse. The amount of dysphagia varies also sometimes from time to time, probably due to proliferation towards the lumen, with subsequent destruction of the proliferating mass.

(2) *Regurgitation of food*.—Present in a greater or lesser degree in almost every case. The vomiting occurs, as a rule, within ten to fifteen minutes of the ingestion of the food. Rarely vomiting occurs after some two or three hours. This is, I believe, entirely dependent on the amount of pouching of the oesophagus above the growth. Pouching of any extent is rare, consequently regurgitation is early. Now and then the oesophagus is much dilated and pouched, leading to a large sac, in which the fluids accumulate till the oesophagus, wearying, as it were, of its efforts to force the food on, gets rid of it by regurgitation upwards. In one case a sultana raisin (given for experimental purposes) was retained for nineteen hours, and then vomited. Here the post-mortem revealed marked pouching.

The character of the regurgitated food proves that it never entered the stomach, the reaction being neutral or alkaline, and milk uncurdled.

The *faeces*, as tested in two or three cases, contained no starch granules, much fat and general débris, and little or no bile-pigment.

When much stricture is present the "trickling sound" may occasionally be well heard by auscultation posteriorly over the region of the oesophagus.

(3) *Pain* is on the whole not a marked symptom, except during deglutition. In some cases it was entirely absent. When present it was commonly referred to behind the episternal notch or lower down, occasionally behind between the scapulae. When, however, the growth implicated the cardiac end of the oesophagus the pain was a more prominent symptom, and was referred to the epigastric region.

In not more than 10 per cent. of cases was pain of such a severe nature as to so direct the patient's mind to the fact as to induce him to seek medical advice.

Vomiting of blood.—A rare symptom. Present only in three or four cases, where the growth had ulcerated through into the arch of the aorta or into the thoracic aorta.

Loss of weight.—As a rule rapid and progressive, at times the loss

averaging one stone in weight per month. Marked retraction of the abdomen is generally present.

Dyspnea and aphonia are often present, due either to direct pressure on the trachea, or to involvement of one or both of the recurrent laryngeal nerves. Dyspnea from second pulmonary complications I do not include under this heading.

Implication of nerves.—Present in quite 28 per cent. of all cases. It is generally stated that the left recurrent laryngeal nerve is almost exclusively the one which is involved. I was rather surprised, therefore, to find that this was not the case.

The left was involved in 12 cases.

" right " " 5 "

Both were " " 3 "

So that out of a total of twenty cases in which the recurrent laryngeals were involved in the growth

the left was affected in 15

and the right " 8

—a relative proportion of two to one. Both recurrent laryngeals can obviously only be affected when the growth is high up; the paralysis of the left is generally due to its being buried in a mass of secondarily affected lymph-glands.

I need hardly remind you that this results in abductor paralysis, the cord being fixed nearly in the middle line, leaving but a narrow respiratory gap.

The vagus was involved in one case only, no cardiac symptoms resulting.

The sympathetic was involved in three or four cases, leading to contraction of the pupil, ptosis, and flushing of the face on the affected side. Interesting experiments were tried in these cases by means of the subcutaneous injection of atropine, etc. Results, however, were variable, and of no diagnostic value.

Enlarged glands in neck.—These are frequently enlarged, in about 30 per cent. of all cases; most commonly those just above the clavicle in the supra-clavicular or subclavian triangle are first felt.

Some writers state that enlargement of glands above the clavicle is very common. Prof. Moritz Schmidt, who has had an extensive experience of these cases, considers that such enlargements are in reality very uncommon.

When the growth is in the region of the cricoid, the local swelling can often be felt, and as it frequently involves the trachea the latter organ is impeded in its movements, both from side to side and up and down during deglutition. In these cases enlarged glands are usually present in the neighbourhood of the ulcer.

Mucoid and frothy expectoration.—A very common and distressing symptom, present in nearly all cases where the growth involves the oesophagus in the region of the cricoid. The expectoration is frequently tinged with bright arterial blood.

Diagnosis may be confirmed (1) by seeing the growth by means of the laryngoscope or the oesophagoscope; (2) by feeling the growth—

(a) Directly by means of the finger.

(b) Indirectly by means of bougies.

Although the bougie is diagnostic of oesophageal obstruction, it does not afford reliable information as to the exact site of the ulcer. Thus, according to the bougie, in—

20 per cent. cases the ulcer was situated at level of the cricoid cartilage.

64 " " " opposite the bifurcation of the trachea.

4 " " " at the cardiac end.

Whilst post-mortem results showed that in

11 per cent. cases the ulcer was situated at the level of cricoid.

77 " " " opposite the bifurcation of the trachea.

11 " " " at the cardiac end.

This discrepancy is explained in three ways:

(1) That in many cases the ulcer was two to three inches long, and therefore led to error as to its exact origin.

(2) That there is frequently a second ulcer above the primary growth.

(3) That the oesophagus varies in length.

Erichsen states that growths opposite the cricoid are the most common. This, however, I was unable to verify. From the cases I have examined the ulcer was situated in 75 per cent. cases opposite the bifurcation of the trachea, and in 11 per cent. cases each in the region of the cricoid and at the cardiac end of the oesophagus.

The diagnosis is easy when a combination of the above symptoms is present, but now and again a correct diagnosis is practically impossible, as the following cases will show.

1. A. W.—admitted with symptoms of peritonitis and a history of nine weeks' abdominal pain. No other symptoms. The abdomen was opened, pus was found in peritoneal cavity and growths in the liver. The post-mortem examination showed a malignant oesophageal ulcer opposite the bifurcation of the trachea, around which an abscess had formed, the contents of which had tracked downwards into the abdomen.

2. W. W.—aged 71, was walking downstairs when he slipped and fell, injuring his leg. Previously he had been perfectly well with the exception of "rheumatic pains" in the right thigh. On examination the right femur was found fractured at about the middle. He gradually sank and died. The post-mortem showed an epitheliomatous ulcer completely surrounding the lower 4½ inches of the oesophagus, with extensive secondary growth in the right femur.

3. H. P.—28, admitted with a history of eight years difficulty in swallowing. This dysphagia was not continuous, but recurred from time to time. Late he had suffered from haemoptysis and persistent cough. A bougie was passed with ease. Patient died suddenly, and a large epitheliomatous mass was discovered three inches below the cricoid cartilage, involving the lungs.

I have here the notes of other similar cases, but these few will suffice to show how difficult the differential diagnosis occasionally is.

The duration of the disease is on an average about eight months. The longest was eighteen months, and the shortest two weeks. The important relation of the oesophagus to the trachea, bronchi, heart, and great vessels explain the rapid course of the disease, death usually resulting from ulceration into one of these vital organs.

Extension of growth and termination.—The growth invades any of the neighbouring structures, and as the ulcer is most common opposite the bifurcation of the trachea, perforation in that direction is the most usual termination. The great tendency to perforation into the left bronchus, which one reads of and which one would anatomically expect, was by no means apparent, as out of 16 cases in which perforation into the air-passages took place only 3 were into the left bronchus; 2 were into the right, 2 at junction of trachea and bronchus, and 9 well above the bifurcation of the trachea. The ulceration follows the general rule in avoiding the highly resistant cartilaginous rings and plates, and eats its way between them. This termination was the most common, leading rapidly to septic pneumonia. The next most frequent termination was direct extension into the substance of the lung, in about 13 cases leading also to septic pneumonia.

The heart and blood-vessels were involved in 9 cases.

There was perforation into left auricle in 1 case.

The growth was adherent to the pericardium and gave rise to pericarditis in 2 cases.

The arch of aorta was embedded in new growth in 2 cases.

The descending part of the arch was perforated in 1 case.

The descending aorta was involved in 1 case.

The descending aorta was perforated in 1 case.

The innominate artery and its branches were surrounded by new growth and innominate vein (right) compressed and occluded in 1 case.

The vertebrae were eroded in 4 cases only. Thus this disease follows the general rule of cancer to grow in the direction of least resistance.

From these facts one may come to the conclusion that death from epithelioma of the oesophagus when not due to simple starvation results in order of frequency from—

(1) Perforation of air-passage (especially of trachea above bifurcation).

(2) Direct destruction and involvement of lung.

(3) Involvement and perforation of heart, pericardium and great vessels.

Secondary growths.—According to many writers secondary growths are rather the exception than the rule. This I did not find to be the case, for out of 35 cases in which a post-mortem was held, secondary growths were found in all but 7.

The most common situations were in the glands of the neck and in the lungs and pleura. Next in order of frequency came the liver in 9 cases, and the glands of the posterior mediastinum in 8.

Erichsen narrates a case where secondary growths occurred in several bones. Spontaneous fracture occurred in the humerus on each side and in one clavicle.

Other rarer sites were the kidney, pancreas, mesosigmoid, femur, lumbar glands and glands of gastro-hepatic omentum. These last are, according to Bland-Sutton, affected in 50 per cent. of cases of pyloric cancer, and in the two or three cases in which it occurred in cancer of the oesophagus the growth was near the cardiac end, proving that the lymphatics of lower end of oesophagus pass to the liver.

In some few cases the ulcer of the oesophagus was quite small and gave rise to no marked symptoms, whilst the liver was enormously enlarged and a mass of secondary new growth, causing much difficulty in the diagnosis.

Some months ago on doing a post-mortem examination, the history of the case being unknown to me, I found the liver a mass of new growth, and searched for a primary source all through the alimentary canal from cardiac orifice of stomach to rectum, and all abdominal viscera and found nothing. As a last resource I examined the oesophagus and found a minute ulcer, the size of a sixpence, which on microscopic examination proved to be epitheliomatous. Since then I have seen two or three other similar cases. The primary ulcer in these cases gave rise to no marked symptoms.

The primary growth is nearly always of the squamous celled variety; it is probable, however, that spheroidal-celled carcinoma may occur, as in some few cases the secondary growths were of that nature, and as a rule the secondary tumours are of the same structure as the primary.

Cell-nests are common, but not so well marked as in epithelioma lingue.

The stricture is in the majority of cases of the *annular* variety; in some the contraction is very marked, practically obliterating the lumen, but as a rule a fair-sized bougie will easily pass through the stricture if the attempt be made during the post-mortem examination.

Direct extension up and down the oesophagus by means of the lymphatics in the submucous tissue is an almost constant feature, giving rise to a chain of beads of new growth, one or more of which may invade the mucous coat, ulcerate, and so lead to multiple epitheliomatous ulcers. Such cases when examined are at first sight rather puzzling, and occasionally it is not always easy to determine which is the primary growth.

TREATMENT may be classified under three headings :

- i. Palliative and symptomatic,
- ii. Mechanical, and
- iii. Operative.

1. *Palliative and symptomatic.*—It is especially important that the diet should be most carefully regulated. All irritating and spiced edibles and drinkables must be absolutely prohibited, and all foods should be soft. The best nourishment is always milk; other articles of diet are weak tea, cocoa, powdered meat, peptonised soups, Valentine's meat juice, Brand's beef jelly, eggs, milk puddings, and jellies. Eggs should be lightly boiled or raw. Food should be given frequently, small quantities at a time.

Alcohol should either be entirely withheld, or only given in the smallest quantities.

Morphia is often needed, but should be kept as much as possible for the last few weeks.

During the earlier stages bismuth, as recommended by Schmidt of Vienna, is often very useful, mechanically protecting the ulcer and easing the pain during deglutition. This drug is but seldom given for this disease, which I think is a mistake, as the results sometimes obtained are really excellent. Cocaine lozenges also are useful, as the cocaine-impregnated saliva accumulates above the stricture, and so gives time for the drug to act.

These two drugs, given before meals, will be found efficient in some cases in not only lessening the pain, but also in diminishing the excessive secretion of tenacious mucus, which is one of the most distressing features of this disease. Atropine is also occasionally useful in diminishing the amount of mucus.

2. *Mechanical treatment.*—Under this heading I include (1) gradual dilatation with bougies; (2) Symons' tubes.

The former method does not commend itself to many on the ground that one has to deal with a malignant ulcer, as to the position, size, and condition of which we are quite in the dark, and which may be nigh to perforation into some neighbouring viscus. Cases are by no means rare, indeed, where such untoward results have occurred. The difficulty in passing the bougies, which is so often very marked, must enormously increase the danger of perforation. Consequently it would seem to be advisable that when once the diagnosis is verified no further attempts should be made to enlarge the lumen of the oesophagus.

When all operative interference, however, is refused, it will become necessary to pass occasionally soft bougies, through which the patient may receive a good meal.

2. *Symons' tubes.*—In some cases these tubes are undoubtedly efficacious in relieving the dysphagia, and in some exceptional cases are appreciated by the patient; but they have also many disadvantages, which, in the opinion of many, outweigh the advantages.

(a) If the growth is at the level of the cricoid they frequently

lead to so much laryngeal irritation that the patient's life is made a greater burden to him even than it was before. If, on the other hand, the growth is far down, one can never be sure whether the end of the tube is through the stricture, as the mass of growth is frequently three to four inches long.

(b) Occasionally the tube becomes bent on itself.

(c) The threads become soon sodden and destroyed, leading to difficulty in the withdrawal, and even in the complete swallowing of the tube. I have notes of cases illustrating all these points.

(d) Lastly, there is the important objection—which applies equally whether the growth be at the level of the cricoid or of the bifurcation of the trachea—that the tube irritates continually the ulcer, and increases the rate of growth and the risk of perforation.

An early inguinal colotomy for rectal carcinoma is advised by many on the ground that the passage of faecal masses over the malignant ulcer increases the rate of growth, and so hastens the end.

On similar grounds it seems advisable to open the alimentary canal below the seat of stricture in the oesophagus, and also to avoid all unnecessary irritation, such as is caused by Symons' tubes.

OPERATIVE TREATMENT.

Esophagectomy was first suggested by Billroth, and carried out successfully by Czerny in 1877. Since then this operation has deservedly fallen into disrepute, and, as Mr. Butlin points out in his 'Operative Surgery of Malignant Disease,' "it can scarcely be a matter of surprise that the operation has not hitherto been practised by British or American surgeons."

Esophagostomy.—This operation has only been performed twice in the cases I have examined, and in each case with a fatal result. The difficulty in every case is to be certain of getting below the growth, and unless the case is taken quite early the extent of the ulceration and the wide submucous infiltration would contra-indicate any attempt to open the canal below the disease.

Gastrostomy.—It will, I think, be generally conceded that this operation is the only one which should be discussed. This treatment was carried out in seventeen cases, with the following results :

Died from or soon after the operation 11 = 65 per cent.

Recovered and did well 6 = 38

This mortality agrees fairly closely with the statistics of Zesas who estimated it from 162 cases at 78 per cent. Gross, however, from 205 cases puts it as low as 29·47 per cent.

In the successful cases the prolongation of life was on an average eighty-two days.

Dr. James Murphy, however, reports a case in the *British Medical Journal* of October, 1888, where the patient lived 403 days after gastrostomy was performed.

I propose now to analyse this high mortality of 65 per cent. Of the eleven cases—

(1) Four died from perforation into the trachea, which took place very soon after the operation.

(2) One died from peritonitis from involvement by direct extension of the stomach, with extravasation of gastric contents.

(3) One died from pneumonia.

(4) One died from abscess around the oesophagus, leading at the time of operation to pyrexia and general symptoms of sapraemia.

(5) One died with growth around the stomach.

(6) In two the cause of death was unknown. No post-mortem.

(7) One gradually sank, the operation failing to relieve the symptoms of starvation.

I think I may fairly assume that (excluding the two cases where the actual cause of death was uncertain) the patient would have succumbed whether the operation had been performed or not, although possibly the operation hastened death by a few hours.

In only one single case was the operation a failure, the patient gradually sinking, and dying of exhaustion and inanition, and quite unrelieved by the operation. I would urge that it is only in such cases as this that one should argue as to whether gastrostomy is or is not a good operation. In the six favourable cases I have been unable to find out how long the patient lived after leaving the hospital. One case, however, was seen six weeks after discharge, and was reported as having benefited greatly, and as being able to work in a grocer's shop. All, however, during their convalescence put on weight, experienced less pain, and lost that awful sense of sinking and hunger which had previously caused so much distress.

The cause of failure is best summed up in Mr. Treves' own words : "One thing is certain, and that is the operation is usually carried out too late. The condition of malnutrition, into which the patient is allowed to sink, is eminently favourable for the growth and progress

of a cancerous mass. The stomach is allowed to pass into a state of atony before any attempt is made to introduce food into it."

Summing up now on the treatment of this disease, it seems advisable that when once the diagnosis is made no further attempts should be made to pass bougies, but that the patient should be carefully dieted, and weighed once a week; and as soon as the weight begins to steadily fall that gastrostomy should be performed, whilst the patient is still strong and able to undergo what is then not so serious an operation.

The question now arises as to what is the best way of performing gastrostomy. The only two methods in practice are Frank's or Alberts, and the more simple one which goes under the name of Howse's operation.

The former method was devised to lessen the escape of gastric juice, but is complicated, and was only performed twice, whilst the more simple operation was carried out eighteen times.

It is usually recommended that a portion of the stomach near to the lesser curvature should be chosen to allow a fair quantity of fluid in the stomach without overflow.

It is best to leave the stomach unopened till the fourth or fifth day, by which time firm adhesions will have formed, the patient in the meantime being fed with nutrient enemata.

A small hole is then made into the stomach with a tenotomy knife, large enough to admit a No. 9 red rubber catheter, through which the patient can at once be fed; the tube is left in, clamped with bulldog forceps, and loosely packed around with gauze.

No definite rules can be laid down as to the after-treatment, except that the stomach must be gradually accustomed to the new mode of nutrition, and that it is advisable that the fluids introduced should be at first partially peptonised.

Later on milk puddings, jellies, and even meat pellets can be introduced, a probe being used, if necessary, to aid the introduction. After three weeks the patient can be taught to feed himself.

The main complication is the leakage of gastric contents, with consequent irritation and ulceration of the skin around. In many cases, however, this is so slight as to cause no serious inconvenience, a little boracic ointment smeared around being quite sufficient.

If it does occur, my own experience leads me to believe that it is most inadvisable to continually insert larger tubes to prevent the leakage. It is far better to use the patent valves recommended by Mr. Harrison Cripps in his work on 'Ovariectomy and Abdominal Surgery.'

Pathological work necessarily falls into two great divisions—the sectional study of morbid tissues and bacteriological diagnosis.

I. *The sectional study of morbid tissues.*—It is simply ridiculous that after all the trouble, work, and expense that is wasted over a modern medical education, a practitioner should remove a piece of cervix and then not possess the requisites for its examination, with a view to the diagnosis of malignant disease. And in the same way with all other doubtful tissues, a small portion can very often be removed from the edge of any doubtful ulcer or growth under cocaine, and a diagnosis thus arrived at; and I am very strongly of opinion that every morbid growth should be examined after, when not so done before, removal; this would no doubt clear up the anomalous behaviour which cases of disease, diagnosed as malignant, sometimes exhibit.

There is no doubt that the most satisfactory, and in the end the cheapest, method of cutting sections is by the paraffin method, using a Cambridge rocker microtome. This implies an incubator for the melted paraffin, the microtome itself with its lesser appendages, as razor, etc., and bottles containing suitable hardening and clearing materials. This sounds very simple, and is so in fact. The hardening and embedding of specimens may be said to be done without any waste of time whatever. A row of bottles with the various reagents is kept on a shelf, and the specimen can be changed from one bottle to the next two or three times a day, when a minute is to spare. And the same way one takes the specimen through the bottles of melted paraffin. After that the methods of cutting, fixing—which is done best in the paraffin incubator,—and staining are familiar to all, and can also be done at any odd half-hour,—e.g. the whole staining and mounting process can be carried through most successfully while dressing in the morning, the stains and clearing reagents being all kept in small tubes or covered solid glass-slides, into which the cover-glass with section can be dropped and left for the required number of minutes. It is really surprising how little time is wasted over the whole thing, after a little mechanical skill has first been acquired.

II. We now come to *bacteriological diagnosis*.—Of course in this we include the staining of tubercle bacilli in sputum and urine.

The more difficult question comes with regard to reactions, such as Vidal's reaction for typhoid, diphtheria cultures and the culture of organisms from abscesses, in cases of septicæmia and others; one need hardly point out the absolute need of the latter if, for example, the antistreptococcus serum treatment is ever to get out of the horrible muddle that clinical diagnosticians of septicæmia have left it in. The question here arises with regard to media for cultures; an incubator is a comparatively cheap thing, but to buy media at the ordinary market price for anything like extensive use would be quite beyond the resources of many. Just for example, the ordinary media are sold at from 4d. to 6d. per tube, and often very much higher than this; now I find myself able to make my media at very considerably less than 4d. a tube, remembering of course that the tubes once purchased can be used any number of times, and only require the media to be renewed. But then when I faced the question of making media with all the various stages and paraphernalia described in the books my heart failed me. Happily I have now learnt to make it so simply as to take all the terrors away from its production. I do not claim that my media will compare, either for clearness or perhaps for usefulness, with those prepared in a first-class hospital laboratory, but for all the practical purposes I have named, and for cultivating any or all of the germs commonly cultivated in the laboratory, they do very well indeed.

I need hardly remind my readers that most of the common media have one necessary ingredient, viz. peptonised beef broth. Many and most complicated ways are described for making it. The following is the way in which I make mine.

Beef tea (Liebig's), peptone (Witte's), salt and water are mixed in the proper proportions, which can be obtained from any text-book. I usually make a litre or a litre and a half at a time. This is then heated in a steriliser for half an hour. It is then markedly acid, and to per cent. solution of potassium hydrate is added till the reaction is faintly alkaline to an alcoholic solution of phenol-phthalein. The flask is then allowed to stand for a few hours, by which time the precipitate caused by neutralising the solution will have sunk and the clear supernatant fluid can be poured off, the residue being thrown away. The broth in the flask is then sterilised by three heatings in the steriliser on successive days. It will now keep for any length of time, and with very little trouble we can prepare from it the ordinary media—broth, agar-agar, and gelatine.

Broth is prepared by pouring from the flask about 3 c.c. into

An Amateur Path. Lab.

By JAMES L. MAXWELL, M.D.(Lond.).

JN venturing to write this description of how I have gathered the materials of an amateur pathological laboratory, I must allow myself a personal explanation to excuse my temerity. I do not for a moment profess to be a pathologist; however attractive that branch of science has been, I have had neither the opportunities nor the talents to aspire to such a position. I merely desire to show how a practitioner, after leaving his medical school, may still be able to keep up all the essentials to scientific diagnosis that are usually performed by or for him in the laboratories at hospital.

I do not mean to suggest that if every one carried out this idea, the need for special pathologists would be decreased, as a matter of fact it would be only increased; but the common everyday pathological work being accomplished by every man for himself, the special pathologist would be called in only for the decision of all doubtful morbid sections, unusual morbid phenomena, or difficult bacteriological problems. In this way the cause of scientific discovery would be made much easier by taking from our present pathologists a vast load of almost purely mechanical work which prevents their having the time to develop the higher branches of the science.

I have a further reason for writing this short paper; when a member of the Resident Staff, we often discussed the possibility of carrying scientific pathological methods into diagnosis in general practice. I would remind many of my colleagues that they only scoffed at my hopes of being able to continue all the ordinary scientific work when I left the hospital, and am glad here to be able to affirm my success.

each of as many tubes as are required; then sterilising the broth tubes as before, and re-sterilising the stock broth which has been unstopped to pour out into the tubes.

Agar-agar is prepared by pouring a required quantity of broth, say 150 c.c., into a small flask, and adding to it the proper proportion of agar which has been previously softened by soaking for half an hour in slightly acidulated water, and then wrung out in fresh water. The mixture is then heated in the steriliser till all the agar is melted. There is now a good deal of precipitated matter present, and, of course, the orthodox and most successful way to deal with this is to filter it through a hot filter. Now this is both difficult and likely to waste much time to the unskilled amateur, and for our purposes it is sufficient to pour the mixture into a beaker and leave to stand till cool. It is now a jelly in which all the precipitated material has settled to the bottom; all that is required, therefore, is to turn out the mould of jelly and cut off a thin section from the bottom, which will include all the precipitated material and can be thrown away. The rest is returned to the beaker, remelted, and poured into test-tubes which are sterilised as before.

Gelatine can be prepared in the same way as agar, but the precipitation is often so slight that it can be neglected.

Another very useful medium, especially for throat cultures, is obtained from ascitic fluid by adding to it 3 per cent. of potassium hydrate solution and 2 per cent. of agar-agar, and then heating as in the preparation of agar-agar tubes.

I feel that I render myself liable to at least one serious charge, that is of encouraging a slovenly method of working. My answer is that this would be true if we were preparing media for special bacteriological research; but we are preparing media for use for specific purposes only, and in ordinary experience media thus prepared appear to be capable of quite satisfactory use.

I have tried to briefly describe the preparation of media to save my readers the dismay that I have suffered in viewing the endless descriptions in text-books. For myself, I prepare about half a gross of tubes of each material at a time; they thus last me several months. I cap each with a little piece of silver-paper, which prevents the medium drying at all; and I find that for my purposes the medium does not depreciate appreciably in that time. Putting all the odd times spent in the preparation of a few months' culture tubes together, I doubt if it exceeds three hours.

I have mentioned my steriliser, but said nothing of it in the way of description. It is of the simplest description possible, and gives absolutely no trouble to work. It is called the New Patent Steam Steriliser (Gallenkamp), and consists of a basin below for water, a compartment fixed on to this by screws in which the articles to be sterilised are placed, and the top fixed also by screws, and with weights which placed on the steam escape regulate the temperature within up to 110° C.

It only remains for me to give a rough idea of expense. Taking the section-cutting part first:

The Cambridge Rocker with everything else necessary for cutting sections costs about £5.

My incubator for paraffin work with gas-regulating apparatus cost less than £3.

With regard to this latter I had to learn a lesson rather dearly. I procured a metal incubator, tinned, I believe, but without any warning from the makers of the dangers of rust destroying it, and lost it in less than a year from being completely rusted through. I have learnt now the fact which no text-book condescends to tell one, that the addition of some washing soda to the water completely obviates all the dangers of rust.

The expenses of the bacteriological apparatus were—for the incubator with gas-heating apparatus about £2 10s. For the steriliser about £3; and for test-tubes, other glass apparatus, and chemical reagents about £1 10s. Total for apparatus for cutting sections £8. Total for bacteriological apparatus £7, making the pathological laboratory up for the very small sum of £15. In addition to this, as one would hardly manage to start everything at once, the expense, as in my case, may be spread over a considerable time.

With regard to the heating of the apparatus I have so far used gas for both my incubators, but I have acquired a spirit-regulating stove which I hope to find as effective for the incubators.

To heat my steriliser I have always used a wickless paraffin air-pressure stove, which heats the steriliser in about ten minutes, and can be left without any attention the whole time any article is being sterilised.

I have tried in this paper just to encourage others who are situated as I am to try and keep more or less up to date in the scientific diagnosis of morbid conditions. We are said, and I fear rightly, to be far

behind our Continental and Transatlantic neighbours in our use of scientific methods in the everyday diagnosis and treatment of disease. If we are to be able to rebut this reproach, it will not be by the exceptional brilliancy of our leading scientists, which we believe our country will always be able to show, but by every thorough man in general practice striving to use his scientific attainments in all the opportunities which his practice allows him. I have not mentioned either examination of urine or blood examination in this paper, because the former, we trust, every one carries out; and the latter, though not used as it should be, presents much smaller difficulties in the matter of apparatus than do the subjects to which this paper has been devoted.

Medical Extracts from Devonshire Folk-lore.



HERE is no more old-fashioned corner of England than the West Country—a district full of large tracts of almost uninhabited moorland, with few large towns, and, from its very position, out of the main road of progress and knowledge. It is a country, moreover, full of memories of the past; when Devon men were found wherever there was fighting to be done; now, as then, men and superstitions die hard there. Perhaps, too, the remains of that Celtic race who once lived there help to keep alive the old traditions and superstitions. It is not so very long ago that a woman was burnt for a witch just outside Exeter. The late Sir John Bowring wrote: "Astrologers, reckoners of nativities, sellers of love philtres, herbalists supposed to be acquainted with the mysterious powers of plants, both creative, curative, and destructive, exist in many parts of this county, and to this hour are consulted by the peasantry." Although charms and cures form but a small part of the science of folk-lore, yet it is from these two classes of superstitions that the following extracts are taken, as being more appropriate for a hospital journal. I am indebted for most of the following examples to that invaluable collection of Devonianisms past and present—the *Transactions of the Devonshire Association*.

An old farmer related the following anecdote from his own experience:—He had kept his bed for some time, and his illness had quite baffled the doctors; in fact, he was thought to be dying. Those about him advised that he should be laid in a grave newly dug for a young woman. (The witching hour of midnight is the correct time for this ceremonial to take place.) An opportunity occurring, he was taken from his bed to the churchyard, and placed for a short time in this melancholy receptacle. Strange to say, from the time he was taken out he began to revive, and was a hale old man at the time he related the story (1868). (It is interesting to note that it was from the time he was taken *out*—not from the time he was placed *in*—the grave that he began to recover. But that is a mere detail!)

R. W., of Ashburton, at one time was very unwell—"Afflictions sore long time he bore; Physicians were in vain"—till one evening, on entering the door of his cottage, he saw a "girt twoad" (toad), which he killed with a pitchfork and threw into the fire. The next evening he saw another toad in the same place, which suffered the same fate as the first. They were the largest toads he ever saw; he believed that they were witches. Formerly he had had "a heart to work, but no strength"; but he soon after this recovered, and has not suffered the like since.

When a young infant is afflicted with rupture, a small "maiden" (*i.e.* self-sown) ash is split for a length of five or six feet down the middle as it stands growing in the wood. The split halves being forced asunder, the naked infant—squalling, as becomes him—is passed three times in the same direction through the opening. Henceforth the defect is cured. The tree is then restored to its natural shape; and as it thrives, so the child thrives.

The person who related this custom instanced several well-known young men of the neighbourhood who had been subjected to the process and had grown up strong and healthy. In one case, in which the tree had evidently suffered from the experiment, he referred to the deformity and sickly growth of the youth who had been passed through it.

In a case which came before the magistrates, in which a woman was accused of swindling people by professing to be a white witch, a witness, thinking to convince the magistrates once for all that the woman's power was genuine, declared that she was the seventh

daughter of the seventh daughter of a seventh daughter. The magistrates were, curiously enough, not convinced.

An ancient charm for the cure of worms in a bullock's tongue:

"When our blessed Lady set and sewed,
Her sweet Son he set and played.
There come a tin-worm from the onder-growth
That stinged her sweet Son by the foot.
The bladher blawded but didn't bust.
He that shall on him call by his name Cobere
In the name of the Father and of the Son and of the Holy
Ghost.
(Say the Lord's Prayer afore and after.)"

A poor woman, near Morwenstow, attributed a sort of stroke, which had affected one of her children after whooping-cough, to the moving of the parsley bed; and it was believed in a neighbouring parish that the parish clerk had been bedridden "ever since the parsley mores were moved."

A barbarous custom near Morwenstow was to bury three live puppies in the corner of a field to rid it of weeds.

A charm for fits.—Walk into a church at midnight; walk up to the Communion table and turn round. This is seldom known to fail.

Cure for bad eyes.—Beg penny pieces from males only, neither saying "Please" nor "Thank you" meanwhile, till sufficient has been collected to buy a pair of ear-rings. If these be constantly worn the eyes are cured. (N.B.—The wearing of ear-rings to cure ophthalmia is common all over Devon.)

To cure a sty in the eye.—Borrow a widow's wedding ring; dip this in milk and rub the sty, which will soon disappear.

A charm for boils.—To creep under an arched Bramble which takes root at each end; and if the two ends are in two different proprietors' lands, so much the better.

Another certain cure for boils.—Poultice for three days and nights, and then place the poultices with their cloths in the coffin of anyone lying dead and about to be buried. The poultices must remain in the coffin.

Two charms for thrush.—1. If a child who does not yet know its father by sight has thrush, the father must blow three times into its mouth. This, however, has been known to fail! 2. An ash tree growing by a running stream is selected. A thread is then tied round one of its twigs by three knots. Make three more knots on each of the two following days, then pass the string through the child's mouth.

Cure for bad eyes in a boy.—A woman who has never seen her father must blow on to his eyes through a hole in a nettle leaf for nine successive days. She must perform this before she "has put her hand to anything for the day." If a girl has bad eyes, a man who has never seen his mother must perform the cure.

Cure for "girding" or "shingles" (herpes zoster).—The patient must be taken in the morning to running water, where the attendant must pick seven rushes growing *by*, but not *in* the water, and lay them on the part affected (which must be bared), drawing them across it. As soon as they have been used the rushes must be thrown into the stream to wash away the disease. This to be done on three succeeding days.

Cure for *any* affection of a child's eyes.—The child is to be taken in its ordinary clothes and laid in a newly dug grave.

Three cures for warts.—1. Take a living slug and impale it on a thorn. In two days the warts will have disappeared, and will never come back any more. 2. Steal a piece of meat—no matter from whom, but preferably from the person who gives the advice,—and bury it in the ground. As the meat rots the warts disappear. 3. Hold a mole in the hand affected, and make its nose bleed. Keep in the hand till it has bled to death, when the warts will disappear.

Charm for erysipelas.—Name the patient's name; then say, "Erysipelas I see! Erysipelas I find! With red cow's milk and a white thorn and the black yolk wool. In the name of the Trinity, Amen." The place is then to be anointed with the "red cow's milk" five or seven times a day, bathed in warm water, and rubbed with soap liniment.

For whooping-cough.—Early, while the dew is on the ground, turn a sheep away from the place where it has been lying, and lay the child face downward on this spot.

Infusion of petals of the common marigold is recommended for "keeping out the measles"!

Cure for an abscess.—Nutmeg given by a person of the opposite sex is a certain cure.

To prevent chilblains.—Wash the child's feet in water melted from the first snow that falls after its birth.

A farmer's son, living at Exminster, had an attack of bleeding from the nose. The father laid the boy on his back and filled his nostrils with "unsavoury extract of farmyard." The treatment was effectual.

Dr. Karkeek, of Torquay, writes in the Transactions "*De Rebus Obstetricis*": "The very high value placed by seamen on the child's caul is well known; and advertisements of this infallible preventive from drowning being for sale may occasionally be seen in the London papers now. The origin of this myth is difficult to discover; but it may be that because the child floats *in utero* in the liquor amnii, therefore the amnion ought to enable its possessor to float in after life.

A very old (*sage*) *femme* in Torquay, of immense experience, recently told me that the placenta should always be placed in a perfectly dry vessel, because, if the vessel contained any fluid whatever, the child would sooner or later die by drowning.

A sty in the eye can be cured by striking the eye with the tip of a cat's tail.

A preventive against toothache.—Carry a potato in the pocket.

An infallible cure for shingles.—Take some raw "ream" (*i.e.* the first skimming of cream from the surface of new milk); also get a cat of the opposite sex to the patient. As the informant expressed it, "a ram cat for a woman, and a yow cat [ewe cat] for a man. Bleed it by cutting the ear. Mix the blood with the ream till the mixture is pink, and then anoint the part affected."

SIMON WETHERELL.

Notes.

THE Opening Address of the Winter Session of the Abernethian Society will be delivered in the Anatomical Theatre on Thursday, October 11th, at 8 p.m., by Mr. A. A. Bowlby. Subject: "Reminiscences of the War in South Africa."

* * *

THE Bradshaw Lecture will be delivered this year by Dr. Archibald E. Garrod, on November 6th. Subject: "The Urinary Pigments in their Pathological Aspects."

* * *

DR. J. S. EDKINS has been appointed an Examiner in Physiology to the Conjoint Board.

* * *

MR. T. FISHER UNWIN announces the publication, on October 15th, of a story entitled 'A Thoroughbred Mongrel,' by Mr. Stephen Townsend.

* * *

THE Assistant Demonstrator of Physiology (*sic*) received the following letter recently:

DEAR SIR,

I should be much obliged if you would kindly have the sputum sent herewith examined for me. May I ask that more than ordinary care may be exercised, and that several of the "pellets" may be examined, as if there is even a suspicion of tubercle in it the matter becomes one of very urgent importance . . . I enclose the fee of 2/6, and I am sure you will let me ask that unusual care may be taken.

I am, etc.

In this brief note are many thoughts that do lie too deep for tears—and smiles. Of the other aspects of the question, however, we shall have something to say next month.

* * *

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

DEAR SIR,—A patient in this hospital presented me with the enclosed prescriptions in the hope they might be

of service to me in my practice. As I do not wish to be selfish, I send the remedies to you to dispose of as you may see fit.

Believe me, yours truly,
G. S. HAYNES.

For the plusey, a peice of brown paper and the white of an egg spread on it then spread it thick with flowrey brimstone then stick it on the side when nearley well give a good dose of salts.

For deafness get a red onion take the inside out then fill it up with oil of armonds let stand some time drop a little in the ear then stop it with a peice of undressed wool.

For astma cough boil houround and liquorice toghether when it is near cold Put a little salt in it dose four times a day one table-spoonfull.

For the diredraea one penneywerth of petermint one penneywerth loderham one penneywerth ipicaskunnia wine one penneywerth rubub half a pound of golden surup one pint warm warter stand till cold dose one table spoon full three times a day.

* * *

A CORRESPONDENT tells us that the Harrogate doctors seem to have discovered a novel means of ad—, making themselves known. In a fashionable photographer's window near the baths many of their portraits are exhibited, each with the original's name appended. There would certainly appear to be great possibilities here, for we know how much recommendation a "striking personality" carries with a certain class of patients. Whole-length pictures would have the advantage of being able to suggest a "good bedside manner." Indeed, it requires but a little flight of fancy to imagine the indigent poor of Harrogate, if such there be, crowding this same photographer's window, and feeling their diseases vanish before the healing influence of such an array of medical talent. One man certainly scores by the business, a sorry one though it be, and he is the photographer.

To Candidates for the "Prel. Sci."

THE SYLLABUS.



O begin with Protozoa,
I should rather like to show a
Paramecium or Amoebe—
That's the simplest of them all.
But they're both so very small
That you'd not see them at all;
So perhaps we'd better go a
Little further on our way,
And commence the Metazoa
Without any more delay.
In the group Cœlenterata,
The authorities who cater
Give us "hydra" for our type-o,
With its epiblast and hypo.
And then, a little later,
We reach the Coelomata,
With it's layer mesoblastic—
Ah, you grow enthusiastic!
Lumbicus is a Chætopod,
With nerve and blood-vess-el;
His nerve cord is a solid rod,
With ganglia as well.

Of the Molluscs, there is Anodon;
And while this subject I'm upon
I'd rather like to say:
'Tis a mussel of fresh water,
And it usually ougter
Be bigger than the mussel that you meet with every day.
There's Astacus, the Arthropod;
You'd better mind how you are shod,
Or else if on this beast you trod
With naked toes,
As one who goes
A-paddling in the sea,
With chela's grip on toes so bare,
He'd make you do a little swear—
Which never ought to be.
Then Scyllium Canicula;
You mustn't be particular—
A little fishy smell you'll have to stand.
There is Rana Temporaria,
And Lepus, which is hairier—
That's all; so now step up and try your hand!

ANON.

Amalgamated Clubs.

CRICKET CLUB.

A RETROSPECT.

THE results of the Season 1900, although not so good as we should have liked them to be, are nevertheless a considerable improvement on last year. Both the batting and bowling averages are distinctly better, and the team as a whole was a much better one.

On turning to the batting averages it will be seen that T. H. Fowler is easily first with an average of 67·1; this, we think, is a record average for the Bart.'s Cricket Club, and we heartily congratulate Fowler on his performance. At the beginning of the season he seemed unable to score, but having once made a start he scored consistently and well, and finished by making 140 not out and 113 in two consecutive matches. It is to be hoped that next season will find him in as good form as this, and if not top of the averages, at any rate within the first few; this we feel quite sure he will do if only he plays as well as he has done during the latter half of the season.

W. S. Nealor, who is second with an average of 39·7, has proved himself to be an exceedingly good bat. This is his first cricket season at the Hospital, and he has been a most welcome addition to the team. On several occasions when wickets were falling fast he has stayed in and played perfect cricket, notably at Henley, Hampstead, and Surbiton, and we look forward to seeing several large scores to his name, not only next season, but for a very long while to come.

H. E. G. Boyle, who is next, with an average of 38·5, has shown considerable improvement on his form of last year, and has in fact proved himself very useful this season. To Fowler and himself fall the honour of having made all the centuries that were made, each of them having scored two; and it is a curious coincidence that they should both have made 140 not out as their highest total.

G. G. Ellett, who comes next, is another newcomer to the team, and also a very great addition to it. Throughout the season his fielding has been particularly smart, but with the exception of his score against Richmond he hardly batted up to his true form, and we confidently expect to see him make far more runs next year than he has this.

L. Orton has unfortunately only played a few times, and it was a great pity that he did not play more often.

G. H. Adam has also only played a few times, but we hope to see him playing regularly and well next season.

H. E. Scoones, who it may be remembered was top of the averages last year, comes next with an average of 18·8. We do not know if this fall in order is due to the responsible position of captain, but it will, no doubt, be agreed to by all that if he did not make as many runs as we should all have liked to see, he made up for any shortcomings by his skill as a captain.

J. C. Sale has not played up to what we consider his true form, and although he has not played often, yet we should like to have seen a return to the form of his first years at the hospital.

On turning to the bowling, it will be seen that H. E. Stanger-

Leathes heads the list; it was unfortunate that he did not play more than he did. His bowling in the Cup Match v. Mary's was particularly good, and it was mainly owing to him that we got Mary's out for the score that we did.

C. A. Anderson, who is next, has bowled well, and we only wish that he had played more. In his cricket for the Hospital he seems to be particularly unlucky, as his batting was distinctly below his true form. Next season, however, we look for improvement.

It will be noticed that H. E. G. Boyle has had to bear the brunt of the bowling, and has, with the exception of Sale, bowled more than twice as many overs as any of the others. When we consider the amount of bowling that he had to do, we think that his position in the batting averages is all the more creditable.

Taken as a whole, this year has been a very good batting one, but it has been decidedly weak in bowling; and the need of a couple of really good bowlers made itself felt on more than one occasion. We would, therefore, strongly urge freshmen—or, in fact, any one who has any claim to be considered a bowler—to let the Secretaries know of his existence at the beginning of the cricket season. Bowlers—and especially good ones—will always be welcomed in the team.

Whether we shall get any good cricketers joining the Hospital between this and next cricket season we cannot possibly predict; but no doubt before the next season we shall, as usual, hear rumours of wonderful men who are coming up, but who, unfortunately, never do turn up. Anyhow, let us hope that next season will prove an exception, and that we may have some really good men amongst the freshmen to choose from.

ST. BARTHOLOMEW'S HOSPITAL CRICKET CLUB.

SEASON 1900.

Matches won, 3. Lost, 6. Drawn, 5. Total, 14.

BATTING AVERAGES (not less than 6 innings).

	No. of innings.	Not out.	Total runs.	Highest score.	Ave- rage.
T. H. Fowler	11	3	537	140*	67·1
W. S. Nealor	12	2	397	81	39·7
H. E. G. Boyle	14	2	462	140*	38·5
G. G. Ellett	9	0	213	69	23·6
L. Orton	6	2	82	30	20·5
G. H. Adam	6	2	81	27	20·2
H. E. Scoones (capt.)	14	1	245	40	18·8
J. C. Sale	7	0	118	64	16·8
C. F. Nicholas	13	2	138	47	12·5
C. A. Anderson	7	0	77	26	11
H. T. Wilson	8	1	61	27	8·7

Five innings and under.

T. M. Body	2	1	45	40*	45
H. Whitwell	1	—	20	20	20
L. V. Thurston	3	2	16	11*	16
C. H. Turner	5	—	74	26	14·8
C. Elliott	3	—	28	27	9·3
H. B. Hill	5	—	25	7	5
H. S. Ward	3	—	4	4	1·3

The following also played:—B. N. Ash, 5; F. Connor, 0 and 2; L. Chambers, 1; H. E. Stanger-Leathes, 0; J. Corbin, 0; C. H. Fernie, 0*; H. Holbrook, 1; C. O'Brien, 0*.

* Signifies not out.

BOWLING AVERAGES (not less than 20 overs).

	Overs.	Maidens.	Runs.	Wickets.	Av'ges.
H. E. Stanger-Leathes	35	7	103	11	9·3
C. A. Anderson	64	10	185	17	10·8
C. H. Turner	28	4	94	4	23·5
H. E. G. Boyle	201	29	745	33	25·6
H. E. Scoones	24	3	81	3	27
W. S. Nealor	85	8	473	17	27·8
G. H. Adam	39	5	154	5	30·8
J. C. Sale	112	28	302	6	50·3
C. F. Nicholas	59	8	241	4	60·2

The following also bowled:

B. N. Ash	2	1	5	1	5
G. G. Ellett	12	1	82	1	82
H. T. Wilson	11	1	50	1	50
F. Connor	7	—	36	1	36
H. B. Hill	3	—	17	—	—
H. Whitwell	3	—	11	—	—
T. H. Fowler	4	1	25	—	—

To the Editor of the St. Bartholomew's Hospital Journal.

SIR,—At a meeting of the United Hospitals' Cricket Club, held during the past summer, it was decided that the members of the winning team in the Cup Competition should be presented individually with a small memento of their victory, in the shape of a silver match-box with the name of the winning hospital, the year, and the individual player's name inscribed thereon.

It was also decided that, as a similar practice had apparently been in existence five years ago, and had then been discontinued, the winning teams for the last five years should be included.

I should therefore be glad if all those men who played for Bart.'s in the Final Cup Ties in 1896 and 1898, when we won the cup, and who have now left the hospital, would kindly let me know their addresses so that I may communicate with them.

I am, yours truly,

H. EDMUND G. BOYLE,
Hon. Sec. U.H.C.C.

UNITED HOSPITALS HARE AND HOUNDS.

GUY'S HOSPITAL, S.E.;

September 24th, 1900.

To the Editor of the St. Bartholomew's Hospital Journal.

SIR,—I should be obliged if you would allow me through your columns to give notice to those interested in cross country running that a meeting will be held at your hospital on October 8th at 5 p.m.

The object of the meeting will be to discuss the future of the United Hospitals' Hare and Hounds Club, which for the last two years has received very little support. It is hoped that the meeting will be well attended, especially by new men just entering St. Bartholomew's Hospital. If you would call attention to this meeting I should feel much indebted.

I am,

Yours truly,
RICHARD S. ROPER,
Hon. Sec. U.H.H. & H.

RIFLE CLUB.

During the past season the club have shot three matches, winning one and losing two. The following are the scores:

ST. BART.'S v. DULWICH COLLEGE.

May 23rd.

ST. BART.'S.

	200 yds.	500 yds.	Totals.
T. H. Gandy	28	24	52
A. C. Brown	25	25	50
D. Finigan	22	28	50
R. J. Morris	19	26	45
P. A. Dingle	19	22	41
N. Maclarens	23	12	35
E. F. Travers	21	8	29
A. S. Petrie	20	2	22
Total	28	24	52

DULWICH COLLEGE.

	200 yds.	500 yds.	Totals.
E. V. Cartmael	29	30	59
H. Raworth	28	30	58
G. L. Hall	29	27	56
H. A. Clark	24	25	49
E. S. Hall	20	26	46
H. J. Dear	23	22	45
H. L. Whitaker	21	16	37
F. G. Aldew	17	17	34
Total	28	24	52

Total..... 324

INTER-HOSPITAL MATCH AT RUNYMEDE.

June 13th.

ST. BART.'S.

	200 yds.	500 yds.	600 yds.	Totals.
A. C. Brown	30	29	23	82
R. J. Morris	26	26	27	79
C. R. V. Brown	26	27	19	72
J. Morris	22	16	25	63
N. Maclarens	23	27	11	61
Total	28	24	22	75

ST. THOMAS'S.

	200 yds.	500 yds.	600 yds.	Totals.
C. de Z. Marshall	28	29	28	85
N. Cartmael	26	25	30	81
— Seymour	—	—	—	75
F. D. Vaughan	26	23	23	72
— Roberts	16	27	29	72
Total	35			

Scores have not been received from Guy's. A Challenge Cup has been given for the winner of this match. This year it was shot for at the Prize Meeting of the United Hospitals Rifle Club, and won by Thomas's, while Bart.'s were second.

ST. BART.'S v. EASTBOURNE COLLEGE.

June 27th.

ST. BART.'S.

	200 yds.	500 yds.	600 yds.	Totals.
A. C. Brown	29	30	59	
A. C. Newman	32	25	57	
D. Finigan	26	29	55	
R. J. Morris	29	25	54	
J. Morris	27	25	52	
C. R. V. Brown	20	22	42	
P. A. Dingle	26	14	40	
N. Maclarens	19	18	37	
Total	396			

EASTBOURNE COLLEGE.

Colour-Sergeant Jameson	25	29	54
Sergeant Teape	23	25	48
Sergeant Cawston	27	21	48
Private Etherington	24	24	48
Sergeant Smallwood	14	29	43
Private Mackenzie	15	23	38
Private Bartlett	19	15	34
Lance-Corporal Lake	26	2	28
Total	341		

Unfortunately matches against Cooper's Hill, King's College, and Whitgift Grammar School had to be scratched.

Three Silver Spoon Competitions were held during the season at Runymede in conjunction with Thomas's and Guy's. The Bart.'s contingent were always to the fore in numbers.

An account of the Prize Meeting will appear next month.

Abernethian Society.

SESSION 1900-1901.

OFFICERS.

Presidents:—G. E. Gask, E. Talbot.

Vice-Presidents:—E. M. Niall, G. V. Bull.

Secretaries:—N. E. Waterfield, J. Corbin.

Additional Committeemen:—L. J. Pickton, T. J. Faulder.

PROGRAMME OF THE SESSION.

1900. Author's Name. Subject of Paper.

July 5.—Sir Dyce Duckworth, M.D.	The Pursuit after Novelties in Medicine.
Oct. 11.—Mr. Anthony Bowlby, F.R.C.S.	Reminiscences of the War in South Africa.
" 18.—Dr. W. H. Hamer	Casual Coincidences in Medical Statistics.
" 25.—.....	Discussions, Clinical and Pathological.
Nov. 1.—Mr. F. A. Bainbridge, B.A.	The Relation of the Tissue to Lymph Formation.
" 8.—Dr. Paterson	Observations on Syphilis.
" 15.—Mr. H. D. Everington, M.B.	Some Points in the Management of Sick Children.
" 22.—.....	Discussions, Clinical and Pathological.
Dec. 29.—Dr. Langdon Brown	
Dec. 6.—Dr. J. Morrison	Cæsarean Section.
" 13.—Dr. Drysdale	Leukæmia and Pseudo-Leukæmia.

1901.

Jan. 10.—Mr. T. Butlin, F.R.C.S.	Pre-historic Medicine and Savage Medicine of To-day.
" 17.—Mr. Shrubsall, M.R.C.S.	Discussions, Clinical and Pathological.
" 24.—.....	Illustrated by Lantern Slides.
" 31.—Mr. W. McAdam Eccles, Irreducible Inguinal Hernia, F.R.C.S.	Public Office and Public Health in London.
Feb. 7.—Dr. W. J. Collins	Euthanasia.
" 14.—Mr. H. Burrows, M.B.	Discussions, Clinical and Pathological.
" 21.—.....	Goitre.
Mar. 7.—Dr. F. W. Robertson	Some Common Skin Diseases of Children.
" 14.—.....	Annual General Meeting.

Volunteer Medical Staff Corps—No. 3 Company.

Fpite of the absence in South Africa of many enthusiasts of this Company, the attendance at Aldershot showed no falling off this year. Bart.'s men were very much in evidence at Thorn Hill camp, and in spite of the weather, which was phenomenally bad, they earned the commendation of their officers by their smartness on parade, and the way in which they made the best of very bad circumstances when off duty.

There are in the Corps men who have annually visited Aldershot for nearly twenty years, and they asserted that this year holds a record for bad weather; the second day in camp was a revelation in what this part of the country can do in this way, storms of rain and wind sweeping over the lines and doing considerable damage.

One night during the first week set in so boisterously that the commanding officer called for a party of twenty men to volunteer for the purpose of patrolling the camp till the morning, and looking after any tents which seemed inclined to collapse, and it is gratifying to know that the whole patrol was made up in less than ten minutes by members of No. 3 Company, who volunteered in body; the two officers in charge being well-known Bart.'s men.

This spirit of self-sacrifice for the public weal is very creditable to No. 3 Company; of course, some ill-natured persons grumbled next day about that beastly patrol hammering their tent pegs right out of sight into the ground, often making bad shots and hitting the occupants of the tents through the curtains instead, "spoiling their night's rest!" The same people also remarked that "they did not know that patrol duty consisted in taking possession of the officers' quarters; condescendingly sleeping on their sofas, drinking their whisky, and smoking their cigars, eating their provisions, and using up a considerable quantity of their notepaper to write graphic descriptions of the campaign home to their relations and friends, occasionally going round the lines with a mallet hitting inoffensive people on the head through tent curtains;" but the fact cannot be denied that No. 3 Company kept the camp standing that night, and have a right to consider themselves heroes.

In past years the Aldershot camp has lasted only a week, but this year, being a special occasion, men were asked to volunteer for at least fourteen days, and twenty-eight days if they possibly could do so. All the men of No. 3 Company remained for the fourteen days, and a considerable section, undaunted by the elements, put in the whole month, and were rewarded by a fortnight's perfect weather.

Surgeon-Captain Miles, commanding the Company, expressed himself as being greatly pleased with the enthusiastic way in which the Company did their work, and the readiness which they always showed to undertake the special duties which stress of circumstances called upon them to do, and it must be owned that in spite of the weather and the inconveniences which it entailed, the spirits and joviality of the men did not for one instant flag, so that the summer camp of 1900 can be counted as among the pleasantest and most successful of these annual trainings.

The Corps as a whole mustered considerably over 50 per cent. of its strength; this is very satisfactory, especially as eighty of its members were away in South Africa with the army, and although the parades were not so long as in former years, a good deal of useful work was got through.

The Doctor.

(From *Bartholomew Ballads*, by F. W. GALE.)



DOCTOR is a man who is everybody's man—
He never seems to have a moment's rest.
His system often feels the want of several meals;
He's forgotten how to get undressed.
He's out about all day, and he's up full half the night,
He's supposed to know all things beneath the sun
He's a "Whiteley" and a "Quain,"
With an automatic brain
And a British Museum in one—
In one;
A universal everything in one.

(Chorus.)

Send for the Doctor, dearest!
Don't be a bit afraid—
We shan't get his bill till Christmas-time,
When he probably won't get paid,
My dear!

Send for the Doctor, dearest!
Tell him to come here, straight;
We shall have to pay the baker,
And perhaps the bonnet-maker;
But the Doctor can very well wait,
My dear!

I've a notion he'll have to wait.

He's supposed to give advice
On the ways of catching mice,
The pathology of whooping-cough and mumps;
And the kind of paint to use,
And the day they ought to choose
For painting up the parish pumps!
Then he gets a cordial greeting
At the local science meeting,
And unanimously put into the chair,
And expected to assist 'em
To discuss the Solar System,
And enumerate the microbes in the air—
In the air!
He must show a close acquaintance with the air.

(Chorus.)

And the pitfalls to be found
In his usual daily round!
There's the maiden aunt who says she's growing thin;
She's the last of his relations,
And he has some expectations,
So he dare not say, "It's owing to the gin!"
And the squire who tells him that
He is growing far too fat;
But the Doctor cannot bring himself to say
That the squire would grow much thinner
If he modified his dinner,
And took a few less lunches in the day—
In the day!
And confined himself to two, p'raps, in the day.

(Chorus.)

When he crawls into his bed
To rest his weary head,
There comes a furious ringing at the bell.
"If you please, sir, missus says,
Won't you come along at once?
She's afraid the baby's going to be unwell."
And he picks up from her tattle,
That the baby's lost his rattle.
"And he swallowed it," she thinks the Missus said.
And the doctor tramps a mile,
And he's met with such a smile,
And he hears they've found the rattle 'neath the bed—
'Neath the bed;
They're sorry, but they found it 'neath the bed.

(Chorus.)

Reviews.

CATECHISM SERIES: SURGICAL ANATOMY AND OPERATIONS.
Parts I and II. (Edinburgh: E. and S. Livingstone.) Price 1s. each.

Commencing as we did with a prejudiced view against such publications, our critique may perhaps be justly considered biased; yet we doubt if any one will differ from us in condemning these "short cuts." Even the lazy student, hoping one week before the exam. to cram up skeletal facts, must needs be muddled often by such "aids," and, indeed, at times actually misled. Anatomy is not a subject that at the last moment can be "got up," nor is it easy to understand without an intimate acquaintance with the dissecting-room; and, when complicated by undecipherable diagrams and inaccurate text, becomes an insuperable task. Moreover, exams. are not the ultimate goal.

"Temporal" is frequently written for "superficial temporal artery." The angle of Ludwig is said to "correspond to the highest point of the arch of the aorta." Sections of limbs have no note as to which side they belong, or whether they are seen from above or below. A diagrammatic section of the carotid sheath does not in the least represent the overlapping of the artery by the vein. The posterior belly of the digastric is drawn as passing between the internal and external carotids. Much space is devoted to puzzling drawings of collateral circulation, whilst one third at least of the bulk of each volume is advertisements. It would be easy to add more defamatory criticisms did the work merit it. Perhaps the description of some operations is better dealt with, but most of these are so abridged as to be of little use. We are in no way favourably impressed with this style of literature, and cannot recommend it. It is to the qualified man useless; to the student a delusion and a snare.

Several other volumes of the Series are to hand, but of none of them can we in justice to our readers say anything more flattering than we have said of these.

ELECTRICITY IN GYNÆCOLOGY, by RICHARD J. COWEN, L.R.C.S.I., L.R.C.P.I. (London: Baillière, Tindall, and Cox.) Pp. 132, price 3s. 6d. nett.

Probably there are no two subjects in our art more difficult to manage than the treatment of disease by electricity and the treatment of gynaecological cases by any method. When, therefore, we come to the combination of electricity and gynaecology we come to a land of much debate. Of the two the gynaecological conditions so treated must first occupy our most serious attention in reviewing such a work as that before us, and no criticism of the actual electrical technique is called for unless the former be agreed upon as regards their pathology, and the bearings of general principles involved. Now this is just what we cannot agree to. We cannot agree that pus can be liquefied in suppurative salpingitis by the action of the posterior pole, or that the attempt should even be made; nor that pelvic exudations can be properly treated by puncture and the application of galvanism by means of the puncturing needle. Our knowledge of general principles refuses to believe a haematosalpinx can be absorbed at all safely by the same pole; and we should quite expect to hear the candidate, even in the year of grace 1900, had been plucked for saying he would prevent "further hemorrhage" (in haematosalpinx) by the "astringent effect" of one or the other terminal. For ectopic gestation we read that attempts may be made to kill the fetus, and that an anaesthetic may be required in "nervous patients;" "the sittings may be repeated twice a week until the cessation of the growth shows that death of the fetus has taken place!" Shade of Matthews Duncan! *Rusticus expectat dum defluat annis*. Can Mr. Cowen judge satisfactorily in a week or two whether the sac is increasing? and what about the patient's risks during the interval of possible uncertainty? The controversy over the electrical treatment of fibroids needs no repetition, and nothing in the book alters the view that the treatment is too tedious, too expensive, too distasteful, and is scarcely less risky than the usually quite successful surgical treatment that ensues in bad cases when medicinal and expectant treatment, which, be it noted, usually accompanies electrical treatment, has failed. This, in fact, sums up our view of most of the treatment by electricity advocated for gynaecological cases. Possibly there is less to be said against it in certain cases of amenorrhoea, superinvolution, deficient involution, and endometritis. But even in these we doubt its necessity in the

first instance. The electrical departments of our leading teaching schools get few such cases. There is no reason why they should not. Such schools are anxious to cure their cases well and expeditiously. Yet they stay away therefrom!

The book is "particularly directed" to the general practitioner. Poor man! We think he generally succeeds in his time-honoured remedies. Suffice it for him to know there is an electrical treatment of his gynaecological cases, and that Mr. Cowen is its sincere and enthusiastic prophet. Such a special branch of a specialised subject is fitted more for his friend in Harley Street, on whose bookshelf may the book rest in peace—not to say "skied." Still there can be no doubt there is a future for electricity in this connection, and Mr. Cowen's effort must be appreciated as an honest and praiseworthy attempt to grapple with it. But we are not quite in touch with his gynaecology, although his electricity may be, and probably is, less open to question. The electrical apparatus and preparations are great—*parturiunt montes, nascentur—ridiculus mus.*

MEDICAL MONOGRAPH SERIES.—No. III—APPENDICITIS, by A. H. TUBBY, M.S.Lond., F.R.C.S.Eng. (Baillière, Tindall, and Cox. Price 2s. 6d.).

This little book of 92 pages is well worth perusal, even if it may not be considered quite as exhaustive as its title suggests. The contents are arranged in eight chapters, and we are glad to note that but little space is allotted to the history of the disease and its treatment, which can seldom be more than merely interesting, and not pertinent to the discussion. Chapter II, "Anatomy of the Parts Concerned," is well treated, but we should have thought "Contents of the Appendix" were better described under pathology. Statistics of some 500 examinations are quoted. No allusion, however, is made to the development of the appendix as a possible explanation of its abnormal position. Chapter III, "Morbid Anatomy and Pathology," is good. It is rather surprising though in the present year of grace to hear of "pus laudabile." Chapter VIII, "Treatment," might easily have been lengthened. The question of infecting the general peritoneal cavity in a case of abscess, whilst operating, is not sufficiently considered. Nothing is said of appendectomy through the right abdominis muscle as prophylactic against herniae, although some interesting percentages are given on subsequent herniae. We should also like to have had some accurate observations upon wearing a truss after abdominal section.

In addition to the author's own ideas the volume contains a wealth of references and quotations, and not the least admirable is the fair balancing of the virtues of medical and surgical treatment of this *fin de siècle* disease.

OPERATIVE AND PRACTICAL SURGERY, for the use of Students and Practitioners, by THOMAS CARWARDINE, M.S.Lond., F.R.C.S. (Pp. 661; 550 Illustrations. Bristol: John Wright and Co. Price 10s. 6d. net).

Within a space of 630 pages the author attempts to deal not only with general surgery, but also with the surgery of the nose, larynx, ear, and eye. It is evident therefore that the subject must be treated in a brief manner, and, in fact, the book is meant to be used only in conjunction with other works on surgery. But a book of this size takes some time to read; as a practical guide it fails just where it would be most useful, as will be presently shown.

One has not to read much of the book before coming to the conclusion that the author's "note-book" has been largely drawn upon without modification, e.g. in the table setting out the differential diagnosis between cerebral and toxemic states, the first point mentioned is the history that alcoholism and hysteria usually occur on Saturday nights. Why not Sundays and Bank Holidays? But at the bottom of the table is a piece of excellent advice, "Never discharge a patient for some hours, unless you are quite sure all the symptoms are due to alcohol or hysteria, and nothing else."

In the chapter on fractures most of the methods which have ever been used in the treatment of these injuries are mentioned and described. There is much that could be deleted in this chapter, and some statements which are certainly wrong. In the after-treatment of Colles' fracture it is recommended "that the splints in adults should be removed at the end of four weeks when impacted, and five weeks when not impacted (!). Occasionally passive movements may be commenced earlier. Great care should be taken to

break down any adhesions which may form in the fingers and wrist. . . . The patient should be warned that probably another six weeks will ensue before she has free use of the fingers." If such a line of treatment is adopted the wrist and fingers will be probably permanently stiff.

We question very much the advisability of including the surgery of special organs in such a book as this, even when dealt with by specialists in those branches.

In the section devoted to diseases of the iris and glaucoma, two of the most important affections in ophthalmic surgery, the ordinary symptoms and signs are not mentioned. Under the former heading a long list of mydrastics is given, without any indication how they are to be applied, the strength of the solution to be used. There is a description of the operations of iridectomy and sclerotomy for glaucoma which the general practitioner does not usually perform without the indications for the operations and the results to be expected. Very brief accounts of such common diseases as corneal ulcers, granular lids, and ophthalmia are given. Yet a page is devoted to pterygium and its treatment—an uncommon disease, and nearly two pages to the operative treatment of exotropia.

Many of the illustrations could be discarded, and the additional space thus gained used to amplify the more important parts of the subject, which are dealt with very imperfectly.

Examinations.

THE following Bart.'s men were successful at the recent examinations at the University of Durham, September 17th to 22nd:

M.D.—M. C. Sykes, of Barnsley, Yorks, M.R.C.S., L.R.C.P., D.P.H.; Surgeon-Major C. J. Hancock, Assam Valley Light Horse, M.R.C.S., L.R.C.P., L.S.A.

M.S.—Major F. P. Maynard, I.M.S.

M.B., B.S.—C. M. Pennefather, M.R.C.S., L.R.C.P. (Second Class Honours), P. M. Perkins, R. Walker, M.R.C.S., L.R.C.P.

3rd M.B.—C. Fisher, M.R.C.S., L.R.C.P.

Appointments.

PRATT, ELDEN, M.D.Lond., appointed Honorary Anæsthetist to the Cardiff Infirmary.

* * *

PRIDHAM, A. T., M.B.Lond., appointed House Physician to the North-Eastern Hospital for Children.

New Addresses.

COCHRANE, A., c/o King, Hamilton, and Co., Calcutta.

FINCHAM, E. C., 36, Addison Road, Kensington, W.

PRATT, ELDEN, 36, Windsor Place, Cardiff.

Birth.

PEARSON.—On September 8th, at Aicedale, Cape Colony, the wife of Maurice G. Pearson, M.B., B.Sc., F.R.C.S.Eng., of a son.

Marriage.

STAPELL—KEY.—On September 5th, at Cusshendun, by the Rev. Charles P. Greene, Rector of Clapham, Rodolph de S. Stawell, M.B., F.R.C.S., of St. Mary's Court, Shrewsbury, youngest son of the late Sir William Stawell, K.C.M.G., Chief Justice of Victoria, to Maud Margaret, second daughter of the late Admiral the Right Hon. Sir Astley Cooper Key, G.C.B., F.R.S.

